

IN THE CLAIMS:

Please CANCEL claims 17, 19 and 20, without prejudice or disclaimer.

Please AMEND the claims as indicated below:

1. (CURRENTLY AMENDED) A system, comprising:
a plurality of nodes ~~communicating signals~~ providing signal channels pursuant to a single channel plan, said channel plan having predefined characteristics for each of ~~a plurality of the signal channels~~;
a spectrum analyzer;
a switch capable of connecting one of said nodes with said spectrum analyzer;
and
a controller controlling said switch to select said one node, said controller capable of monitoring ~~communication of signals~~ signals on signal channels provided on by said selected one node by conducting a test plan, ~~said test plan~~ prescribing performance of at least one an automated test which compares actual measured values from monitoring the signals with expected values indicated by the predefined characteristics of the channel plan and thereby produces a test result, said test plan further configured with ~~at least one an~~ alarm limit, the controller further configured to compare ~~results~~ the test result from said ~~at least one~~ test with said alarm limit, the controller further configured to control said spectrum analyzer to perform a failure time spectrum scan when ~~at least one the~~ test result exceeds said alarm limit, to generate a plot of power amplitude versus frequency over the frequency spectrum of said selected one node, and to display the generated plot.
2. (PREVIOUSLY PRESENTED) The system of claim 1, further comprising a database, wherein said controller is further configured to store said failure time spectrum scan in the database.
3. (PREVIOUSLY PRESENTED) The system of claim 1, wherein the controller is further configured to control the spectrum analyzer to perform a failure time spectrum scan over the entire frequency spectrum of said selected one node.
4. (ORIGINAL) The system of claim 1, wherein said nodes are part of a cable television network.

5. (ORIGINAL) The system of claim 1, further comprising:
a graphical user interface, wherein said controller is configured to retrieve and communicate said failure time spectrum scan from said database to said graphical user interface for displaying said failure time spectrum scan in response to a user request.
6. (CURRENTLY AMENDED) The system of claim 1, wherein said ~~at least one~~ test is a test of ~~selected from the group of~~ total node power, carrier-to-noise power, percent availability, average noise power, channel power, ~~and/or~~ and burst counter.
7. (ORIGINAL) The system of claim 5, wherein said user request is communicated to said controller via said graphical user interface.
8. (ORIGINAL) The system of claim 5, wherein said controller is further configured to permit a user to configure said spectrum analyzer to repeat the failure time spectrum scan in response to a user request.
9. (ORIGINAL) The system of claim 8, wherein said spectrum analyzer is configured to perform said repeat of said failure time spectrum scan with the same spectrum analyzer configuration.
10. (ORIGINAL) The system of claim 9, wherein said user request is communicated to said controller via said graphical user interface.
11. (PREVIOUSLY PRESENTED) The system of claim 2, wherein said controller is further configured to control said spectrum analyzer to perform said failure time spectrum scan wherein said failure time spectrum scan is performed over a portion of said selected one node's frequency spectrum.
12. (ORIGINAL) The system of claim 11, wherein said controller controls said spectrum analyzer in response to said test plan.
13. (PREVIOUSLY PRESENTED) The system of claim 12, wherein said controller

controls said response to said test plan by adjusting start and stop frequencies sent to configure said spectrum analyzer based on a respective channel under test at a time said alarm limit was exceeded.

14. (CURRENTLY AMENDED) A computer readable medium having a program for enabling efficient monitoring of electrical signals communicated along a plurality of nodes, each node having a plurality of signal channels, the signals being measured by a spectrum analyzer, the program comprising:

means for providing a channel plan having predefined characteristics for each signal channel;

means for receiving signal data from a respective node sampled by the spectrum analyzer; and

means for testing communication of said signals on at least one of said nodes~~the respective node~~ by conducting a test plan ~~on said signal data, said test plan prescribing performance of measurement of at least one~~ an automated test which compares actual measured values from the received signal data with expected values indicated by the predefined characteristics of the channel plan and thereby produces a test result~~on at least one node~~, said means for testing further configured to compare ~~said the test results~~ result with an alarm limit and to control said spectrum analyzer to perform a failure time spectrum scan when said test results exceed said alarm limit, said failure time spectrum scan representative of power amplitude versus frequency over the frequency spectrum of ~~said the respective node; and~~ means for displaying the power amplitude versus frequency over the frequency spectrum represented by the failure time spectrum scan.

15. (CURRENTLY AMENDED) A method comprising:

providing a channel plan having predefined characteristics for each signal channel provided by a node of a network;

testing communication of a plurality of signals communicated on a~~respective~~the node of a network by conducting a test plan, said test plan prescribing ~~measurement of at least one~~ an automated test on the respective node~~which compares actual measured values on each signal channel provided by the node with expected values indicated by the predefined characteristics of the channel plan, and thereby produces a test result;~~

comparing the test result~~results from said at least one test~~ with a user definable alarm

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limit; and

performing a failure time spectrum scan on ~~said-respective~~the node when said test ~~results-~~result exceed said alarm limit, said failure time spectrum scan representative of power amplitude versus frequency over the frequency spectrum of ~~said-respective~~the node; and displaying the power amplitude versus frequency over the frequency spectrum of the node.

16. (PREVIOUSLY PRESENTED) The method of claim 15, further comprising the step of storing said failure time spectrum scan in a database.

17. (CANCELED)

18. (PREVIOUSLY PRESENTED) The method of claim 16, wherein said failure time spectrum scan is performed in response to said test plan by adjusting start and stop frequencies of said failure time spectrum scan based on a respective channel under test at a time said alarm limit was exceeded.

19. (CANCELED)

20. (CANCELED)

21. (CURRENTLY AMENDED) An apparatus comprising:
a spectrum analyzer monitoring a plurality of channels corresponding to a respective node of a network in accordance with a test plan for the node, wherein a channel plan provides predefined characteristics for each of the channels, and the test plan providing-a provides an automated test which compares actual measured values from monitoring signals on the channels by the spectrum analyzer with expected values indicated by the predetermined characteristics of the channel plan~~in accordance with a channel plan for the plurality of channels;~~ and

a controller automatically performing a failure test spectrum scan for the respective node when a result of the test exceeds an alarm limit for the test, wherein the failure test plan provides a power amplitude versus frequency graph over a frequency spectrum of the node, and the controller automatically displays the graph.

22. (PREVIOUSLY PRESENTED) The apparatus of claim 21, wherein the respective node is a node of a cable television network.

23. (CURRENTLY AMENDED) The apparatus of claim 21, further comprising:
a graphical user interface, wherein the controller displays the graph~~failure time spectrum scan is displayed~~ on the graphical user interface in response to a user request.

24. (CURRENTLY AMENDED) An apparatus comprising:
a spectrum analyzer monitoring a plurality of channels corresponding to a respective node of a network in accordance with a test plan for the node, wherein a channel plan provides predefined characteristics for each of the channels, and the test plan ~~providing a~~ provides an automated test which compares actual measured values from monitoring signals on the channels by the spectrum analyzer with expected values indicated by the predetermined characteristics of the channel plan;~~in accordance with a channel plan for the plurality of channels; and~~
means for automatically performing a failure test spectrum scan for the respective node when a result of the test exceeds an alarm limit for the test, the failure test plan providing a power amplitude versus frequency graph over a frequency spectrum of the node; and
means for displaying the graph.

25. (CURRENTLY AMENDED) An apparatus comprising:
a spectrum analyzer;
a switch controllable to connect a respective node of a plurality of nodes of a network to the spectrum analyzer, each node having a corresponding plurality of channels; and
a controller controlling the switch to connect a selected node of the plurality of nodes to the spectrum analyzer, wherein
the spectrum analyzer monitors the plurality of channels corresponding to the selected node in accordance with a test plan for the selected node,
a channel plan provides predefined characteristics for each of the plurality of channels corresponding to the selected node,
the test plan ~~providing~~ provides a-an automated test which compares actual measured values from monitoring signals on the plurality of channels corresponding to the selected node

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by the spectrum monitor with expected values indicated by the predetermined characteristics of the channel plan, in accordance with a channel plan for the plurality of channels corresponding to the selected node; and

the controller automatically performs a failure test spectrum scan for the selected node when a result of the test exceeds an alarm limit for the test, the failure test plan providing a power amplitude versus frequency graph over a frequency spectrum of the selected node, and the controller displays the graph on a screen.